# SIEMENS

#### Data sheet

### 6ES7215-1BG40-0XB0



SIMATIC S7-1200, CPU 1215C, COMPACT CPU, AC/DC/RELAY, 2 PROFINET PORT, ONBOARD I/O: 14 DI 24V DC; 10 DO RELAY 2A, 2 AI 0-10V DC, 2 AO 0-20MA DC, POWER SUPPLY: AC 85 -264 V AC AT 47 - 63 HZ, PROGRAM/DATA MEMORY: 100 KB

General information	
Engineering with	
<ul> <li>Programming package</li> </ul>	STEP 7 V13 SP1 or higher
Display	
with display	No
Supply voltage	
Rated value (AC)	
• 120 V AC	Yes
• 230 V AC	Yes
permissible range, lower limit (AC)	85 V
permissible range, upper limit (AC)	265 V
Line frequency	
<ul> <li>permissible frequency range, lower limit</li> </ul>	47 Hz
• permissible frequency range, upper limit	63 Hz
Input current	
Current consumption (rated value)	100 mA at 120 V AC; 50 mA at 240 V AC
Current consumption, max.	300 mA at 120 V AC; 150 mA at 240 V AC
Inrush current, max.	20 A; at 264 V
Power losses	
Power loss, typ.	12 W
Memory	
Type of memory	EEPROM
Work memory	

expandable         No           integrated         4 Mbyte           integrated         1 7 µs; / instruction           for word operations, typ.         0.085 µs; / instruction           for word operations, typ.         2 S µs; / instruction           for word operations, typ.         0.085 µs; / instruction           for word operations, typ.         1 Mbyte           addressable blocks (total)         0.85 µs; Size of bit memory address area           Process inage         1           intiti houts, adjustable         1 kbyte <th>Integrated</th> <th>125 kbyte</th>	Integrated	125 kbyte
Lad memory         Integrated       4 Mbyta         Integrated       4 Mbyta         Usig-in (SIMATIC Memory Card), max.       with SIMATIC memory card         Backup       Ves: maintenance-free         • present       Yes: maintenance-free         • without battery       Ves         CPU processing times       0.085 µs; / instruction         for bit operations, typ.       0.085 µs; / instruction         for doarty point attituret(c, typ.       2.5 µs; / instruction         CPU-blocks       DBs, FCS, FBs, counters and timers. The maximum number of addressable blocks ranges from 1 to 65535. There is no restriction, the entire working memory can be used         OB       United only by RAM for code         Plata areas and their retentivity       retentive data area in total (incl. times, counters, flags), max.         Flag       In kuyte         • Number, max.       United only by RAM for code         Process image       In kuyte         • Inputs, adjustable       1 kbyte         • Outputs, adjustable       1 kbyte         • Drokus per system, max.       3 comm. modules, 1 signal board, 8 signal modules         Hardware cock (real-time clock)       Yes         • Deviation per day, max.       + 6 0 simonth at 25 °C         • Deviation per day, max.       4% 0 sigmo		
• Integrated       4 Mbyte         • Present       with SIMATIC memory card         • present       Yes: maintenance-free         • without battery       Yes         CPU processing times       0.085 µs; / instruction         for bit operations, typ.       0.085 µs; / instruction         for roting point arithmetic, typ.       1.7 µs; / instruction         for floating point arithmetic, typ.       2.5 µs; / instruction         for floating point arithmetic, typ.       2.5 µs; / instruction         CPU-blocks       Unmber of blocks (total)         DBs, FCs, FBs, counters and timers. The maximum number of addressable blocks ranges from 1 to 65535. There is no restriction, the entire working memory can be used         OB       United and a rae in total (incl. times, counters, flags), max.         Flag       10 kbyte         flags, max.       10 kbyte         Flag       Instruction         • Number, max.       8 kbyte; Size of bit memory address area         Process image       1         • Inputs, adjustable       1 kbyte         • Outputs, adjustable       1 kbyte         • Outputs, adjustable       1 kbyte         • Deviation per day, max.       4 60 k; Typical         Process image       1         • Inputs, adjustable       1 k		
• Plug-in (SIMATIC Memory Card), max.     with SIMATIC memory card       Backup     • present     Yes; maintenance-free       • without battery     Yes       CPU processing times     0.085 µs; / instruction       for hit operations, typ.     0.085 µs; / instruction       for mort operations, typ.     1.7 µs; / instruction       for floating point arithmetic, typ.     2.5 µs; / instruction       CPU-blocks     DBs, FCs, FBs, counters and timers. The maximum number of addressable blocks ranges from 1 to 8555. There is no restriction, the entire working memory can be used       OB     • Number, max.       Plana areas and their retentivity     10 kbyle       retentive data area in total (incl. times, counters, flags), max.     10 kbyle       Flag     •       • Number, max.     8 kbyle; Size of bit memory address area       Process image     •       • Inputs, adjustable     1 kbyle       • Outputs, adjustable     1 kbyle       • Outputs, adjustable     1 kbyle       • Outputs, adjustable     1 kbyle       • Dutputs, adjustable     1 kbyle       • Dutputs, adjustable     1 kbyle       • Dutputs, adjustable     1 kbyle       • Order     •       Process image     •       • Order for day, max.     • 60 s/month at 25 °C       • Backup time     48 0 h; Typic		4 Mbyte
Backup       • present       Yes; maintenance-free         • without battery       Yes         CPU processing times       0.085 µs; / instruction         for bit operations, typ.       0.085 µs; / instruction         for word operations, typ.       1.7 µs; / instruction         for floating point arithmetic, typ.       2.5 µs; / instruction         CPU-blocks       DBs, FCs, FBs, counters and timers. The maximum number of addressable blocks ranges from 1 to 85535. There is no restriction, the entire working memory can be used         OB       • Number, max.         Limited only by RAM for code       Data areas and their retentivity         retentive data area in total (incl. times, counters, flags), max.       10 kbyte         Flag       10 kbyte         • Number, max.       8 kbyte; Size of bit memory address area         Process image       1         • Inputs, adjustable       1 kbyte         • Duota, adjustable       1 kbyte         Hardware clock (real-time clock)       Yes         • Hardware clock (real-time clock)       Yes         • Deviation per day, max.       46 of smonth at 25 °C         • Backup time       14, Integrated         • of which, inputs usable for technological functions       6; HSC (High Speed Counting)         • Integrated channels (DI)       Yes	-	
• present     Yes; maintenance-free       • without battery     Yes       CPU processing times     0.085 µs; / instruction       for fit operations, typ.     0.085 µs; / instruction       for fit operations, typ.     1.7 µs; / instruction       for fit operations, typ.     1.7 µs; / instruction       for floating point arithmetic, typ.     2.5 µs; / instruction       CPU-blocks        Number of blocks (total)     DBs, FCs, FBs, counters and timers. The maximum number of addressable blocks ranges from 1 to 65535. There is no restriction, the entire working memory can be used       OB        • Number, max.     Limited only by RAM for code       Data areas and their retentivity        retentive data area in total (incl. times, counters, flags), max.     10 kbyte       Flag        • Number, max.     8 kbyte; Size of bit memory address area       Process image        • Inputs, adjustable     1 kbyte       • Outputs, adjustable     1 kbyte       • Outputs, adjustable     3 comm. modules, 1 signal board, 8 signal modules       Time of day     Yes       Clock     Yes       • Backup time     14; Integrated       • of which, inputs usable for technological functions     6; HSC (High Speed Counting)       • Integrated channels (DI)     14       • of which,		
• without battery     Yes       CPU processing times     0.085 µs; / instruction       for bit operations, typ.     1.7 µs; / instruction       for modi operations, typ.     2.5 µs; / instruction       for finating point arithmetic, typ.     2.5 µs; / instruction       CPU-blocks     DBs, FCs, FBs, counters and timers. The maximum number of addressable blocks ranges from 1 to 65535. There is no restriction, the entire working memory can be used       OB     United only by RAM for code       Data areas and their retentivity     retentive data area in total (incl. times, counters, flags), max.       Flag     10 kbyte       • Number, max.     8 kbyte; Size of bit memory address area       Process image     1       • Number, max.     3 comm. modules, 1 signal board, 8 signal modules       Process image     1       • Outputs, adjustable     1 kbyte       • Outputs, adjustable     1 kbyte       • Outputs, adjustable     1 kbyte       • Outputs, adjustable     3 comm. modules, 1 signal board, 8 signal modules       Tere of day     480 h; Typical       Deviation per day, max.     46 of s/month at 25 °C       • Backup time     480 h; Typical       Digital inputs     14; Integrated       • of which, inputs usable for technological functions     6; HSC (High Speed Counting)       Integrated channels (D)     44 <t< td=""><td></td><td>Yes: maintenance-free</td></t<>		Yes: maintenance-free
CPU processing times         OUNDER Service of the operations, typ.         0.085 µs; / instruction           for word operations, typ.         1.7 µs; / instruction         1.7 µs; / instruction           for floating point arithmetic, typ.         2.5 µs; / instruction         25 µs; / instruction           CPU-blocks         DBs, FCs, FBs, counters and timers. The maximum number of addressable blocks ranges from 10.6535. There is no restriction, the entire working memory can be used           OB         Imited only by RAM for code           OB         Imited only by RAM for code           Pata areas and their retentivity         10 kbyte           retentive data area in total (incl. times, counters, flags), max.         10 kbyte           Flag         10 kbyte           • Number, max.         8 kbyte; Size of bit memory address area           Process image         1 kbyte           • Inputs, adjustable         1 kbyte           • Outputs, adjustable         1 kbyte           • Outputs, adjustable         1 kbyte           Process image         1 kbyte           • Outputs, adjustable         1 kbyte           • Outputs, adjustable         1 kbyte           • Deviation per day, max.         3 comm. modules, 1 signal board, 8 signal modules           Time of day         10 simonth at 25 °C           • Backup t		
for bit operations, typ.       0.085 µs; / instruction         for word operations, typ.       1.7 µs; / instruction         for floating point arithmetic, typ.       2.5 µs; / instruction         CPU-blocks       2.5 µs; / instruction         Number of blocks (total)       DBs, FCs, FBs, counters and timers. The maximum number of addressable blocks ranges from 1 to 65535. There is no restriction, the entire working memory can be used         OB       • Number, max.         Data areas and their retentivity         retentive data area in total (incl. times, counters, flags), max.         Flag         • Number, max.         Process image         • Inputs, adjustable         1 kbyte         • Outputs, adjustable         1 kbyte         • Deviation per day, max.         • Backup time         Ods         • Or which, inputs usable for technological functions         • of which, inputs usable for technological functions         • Integrated channels (DI)       14         • of which, inputs usable for techn	• without battery	1.00
for word operations, typ.       1.7 µs; / instruction         for floating point arithmetic, typ.       2.5 µs; / instruction         CPU-blocks         Number of blocks (total)       DBs, FCs, FBs, counters and timers. The maximum number of addressable blocks ranges from 1 to 65535. There is no restriction, the entire working memory can be used         OB       Emitted only by RAM for code         0 Number, max.       Limited only by RAM for code         Data areas and their retentivity       10 kbyte         retentive data area in total (incl. times, counters, flags), max.       10 kbyte         Flag       0         • Number, max.       8 kbyte; Size of bit memory address area         Process image       1 kbyte         • Inputs, adjustable       1 kbyte         • Inputs, adjustable       1 kbyte         • Orded area configuration       3 comm. modules, 1 signal board, 8 signal modules         Time of day       Eleviation per day, max.         • Deviation per day, max.       4/- 60 s/month at 25 °C         • Backup time       14; Integrated         • of which, inputs usable for technological functions       6: HSC (High Speed Counting)         • Integrated channels (DI)       14         • of which, inputs usable for technological functions       6: HSC (High Speed Counting)         • integ		
for floating point arithmetic, typ.       2.5 µs; / instruction         CPU-blocks         Number of blocks (total)       DBs, FCs, FBs, counters and timers. The maximum number of addressable blocks ranges from 1 to 65535. There is no restriction, the entire working memory can be used         OB       Itimited only by RAM for code         OB       Itimited only by RAM for code         Oata areas and their retentivity       retentive data area in total (incl. times, counters, flags), max.         Flag       10 kbyte; Size of bit memory address area         • Number, max.       8 kbyte; Size of bit memory address area         Process image       1 kbyte         • Inputs, adjustable       1 kbyte         • Outputs, adjustable       1 kbyte         • Outputs, adjustable       3 comm. modules, 1 signal board, 8 signal modules         Time of day       Clock         • Hardware colck (real-time clock)       Yes         • Backup time       480 h; Typical         Digital inputs       14; Integrated         • of which, inputs usable for technological functions       6; HSC (High Speed Counting)         Integrated channels (DI)       14         m/p-reading       Yes	for bit operations, typ.	0.085 μs; / instruction
CPU-blocks         Number of blocks (total)       DBs, FCs, FBs, counters and timers. The maximum number of addressable blocks ranges from 1 to 65535. There is no restriction, the entire working memory can be used         OB <ul> <li>Number, max.</li> <li>Limited only by RAM for code</li> </ul> Data areas and their retentivity <ul> <li>retentive data area in total (incl. times, counters, flags), max.</li> <li>flag</li> <li>Number, max.</li> <li>8 kbyte; Size of bit memory address area</li> <li>Process image</li> <li>Inputs, adjustable</li> <li>1 kbyte</li> <li>Outputs, adjustable</li> <li>1 kbyte</li> <li>Participation</li> <li>Number of modules per system, max.</li> <li>3 comm. modules, 1 signal board, 8 signal modules</li> <li>Time of day</li> <li>Clock</li> <li>Hardware clock (real-time clock)</li> <li>Yes</li> <li>Backup time</li> <li>Os // for simultaneously controllagical for technological functions</li> <li>integrated channels (DI)</li> <li>integrated channels (DI)</li> <li>integrated channels (DI)</li> <li>integrated channels (DI)</li> <li>Mumber of simultaneously controllable inputs</li> <li>Number of simultaneously controllable inputs</li> <li>Number of simultaneously controllable inputs</li> <li>Number of simultaneously controllable inputs</li> <li>Yes</li> <li>Number of simultaneously controllable inputs</li> <li>Seckup to the simultaneously controllable inputs</li> <li>Mumber of simultaneously controllable inputs</li> <li>Mumber of simultaneously controllable inputs</li> <li>Seckup to the simultaneously controllable inputs</li> <li>Mumber of simultaneously controllable inputs</li> <li>Mumber of simultaneously</li></ul>	for word operations, typ.	1.7 μs; / instruction
Number of blocks (total)       DBs, FCs, FBs, counters and timers. The maximum number of addressable blocks ranges from 1 to 65535. There is no restriction, the entire working memory can be used         OB <ul> <li>Number, max.</li> <li>Limited only by RAM for code</li> </ul> Data areas and their retentivity <ul> <li>retentive data area in total (incl. times, counters, flags), max.</li> <li>Flag</li> <li>Number, max.</li> <li>B kbyte; Size of bit memory address area</li> </ul> Process image <ul> <li>Inputs, adjustable</li> <li>Ikbyte</li> <li>Outputs, adjustable</li> <li>Ikbyte</li> </ul> Hardware configuration <ul> <li>S comm. modules, 1 signal board, 8 signal modules</li> <li>Time of day</li> </ul> Clock <ul> <li>Yes</li> <li>Backup time</li> <li>Also h; Typical</li> </ul> Digital inputs <ul> <li>Yes</li> <li>Yipcial</li> <li>S (HSC (High Speed Counting)</li> <li>Integrated channels (DI)</li> <li>Integrated channels (DI)</li> <li>Integrated channels (DI)</li> <li>Yes</li> <li>Number of simultaneously controllable inputs</li> </ul>	for floating point arithmetic, typ.	2.5 μs; / instruction
Number of blocks (total)       DBs, FCs, FBs, counters and timers. The maximum number of addressable blocks ranges from 1 to 65535. There is no restriction, the entire working memory can be used         OB <ul> <li>Number, max.</li> <li>Limited only by RAM for code</li> <li>Data areas and their retentivity</li> <li>retentive data area in total (incl. times, counters, flags), max.</li> <li>Flag</li> <li>Number, max.</li> <li>B kbyte; Size of bit memory address area</li> <li>Process image</li> <li>Inputs, adjustable</li> <li>I kbyte</li> <li>Outputs, adjustable</li> <li>I kbyte</li> <li>I kbyte</li> <li>Outputs, adjustable</li> <li>I kbyte</li> <li>Outputs, adjustable</li> <li>I kbyte</li> <li>I kbyte</li> <li>I kbyte</li> <li>I kbyte</li> <li>I kbyte</li> <li>I kbyte</li></ul>	CPU-blocks	
OB       Imited only by RAM for code         Data areas and their retentivity       retentive data area in total (incl. times, counters, flags), max.         flags), max.       10 kbyte         Flag       10 kbyte         • Number, max.       8 kbyte; Size of bit memory address area         Process image       1 kbyte         • Inputs, adjustable       1 kbyte         • Outputs, adjustable       1 kbyte         • Outputs, adjustable       1 kbyte         • Outputs, adjustable       1 kbyte         • Number of modules per system, max.       3 comm. modules, 1 signal board, 8 signal modules         Time of day       Clock         • Hardware clock (real-time clock)       Yes         • Deviation per day, max.       +/- 60 s/month at 25 °C         • Backup time       480 h; Typical         Digital inputs       14; Integrated         • of which, inputs usable for technological functions       6; HSC (High Speed Counting)         integrated channels (DI)       14         m/p-reading       Yes         Number of simultaneously controllable inputs       Yes		addressable blocks ranges from 1 to 65535. There is no
• Number, max.       Limited only by RAM for code         Data areas and their retentivity       10 kbyte         retentive data area in total (incl. times, counters, flags), max.       10 kbyte         Flag       10 kbyte         • Number, max.       8 kbyte; Size of bit memory address area         Process image       1 kbyte         • Inputs, adjustable       1 kbyte         • Outputs, adjustable       1 kbyte         • Outputs, adjustable       1 kbyte         • Outputs, adjustable       3 comm. modules, 1 signal board, 8 signal modules         Time of day       Vers         Clock       480 h; Typical         • Hardware clock (real-time clock)       Yes         • Deviation per day, max.       4/- 60 s/month at 25 °C         • Backup time       480 h; Typical         Digital inputs       14; Integrated         • of which, inputs usable for technological functions       6; HSC (High Speed Counting)         integrated channels (DI)       14         m/p-reading       Yes         Number of simultaneously controllable inputs       Yes	OB	restriction, the chare working memory can be used
retentive data area in total (incl. times, counters, flags), max.       10 kbyte         Flag       8 kbyte; Size of bit memory address area         • Number, max.       8 kbyte; Size of bit memory address area         Process image       1 kbyte         • Inputs, adjustable       1 kbyte         • Outputs, adjustable       1 kbyte         • Outputs, adjustable       1 kbyte         • Outputs, adjustable       3 comm. modules, 1 signal board, 8 signal modules         Time of day       2         Clock       Yes         • Hardware clock (real-time clock)       Yes         • Backup time       480 h; Typical         Digital inputs       14; Integrated         • of which, inputs usable for technological functions       6; HSC (High Speed Counting)         integrated channels (DI)       14         m/p-reading       Yes         Number of simultaneously controllable inputs       Yes		Limited only by RAM for code
flags), max.       Flag         Flag       8 kbyte; Size of bit memory address area         Process image       1 kbyte         • Inputs, adjustable       1 kbyte         • Outputs, adjustable       1 kbyte         • Outputs, adjustable       1 kbyte         • Mardware configuration       3 comm. modules, 1 signal board, 8 signal modules         Time of day       5 comm. modules, 1 signal board, 8 signal modules         Clock       480 h; Typical         • Hardware clock (real-time clock)       Yes         • Backup time       480 h; Typical         Digital inputs       14; Integrated         • of which, inputs usable for technological functions       6; HSC (High Speed Counting)         integrated channels (DI)       14         m/p-reading       Yes         Number of simultaneously controllable inputs       Yes	Data areas and their retentivity	
Flag         • Number, max.       8 kbyte; Size of bit memory address area         Process image         • Inputs, adjustable       1 kbyte         • Outputs, adjustable       1 kbyte         Hardware configuration       3 comm. modules, 1 signal board, 8 signal modules         Number of modules per system, max.       3 comm. modules, 1 signal board, 8 signal modules         Clock       -         • Hardware clock (real-time clock)       Yes         • Deviation per day, max.       +/- 60 s/month at 25 °C         • Backup time       480 h; Typical         Digital inputs       14; Integrated         • of which, inputs usable for technological functions       6; HSC (High Speed Counting)         integrated channels (DI)       14         m/p-reading       Yes         Number of simultaneously controllable inputs       14	retentive data area in total (incl. times, counters,	10 kbyte
• Number, max.       8 kbyte; Size of bit memory address area         • Process image       1 kbyte         • Inputs, adjustable       1 kbyte         • Outputs, adjustable       1 kbyte         • Outputs, adjustable       1 kbyte         • Mumber of modules per system, max.       3 comm. modules, 1 signal board, 8 signal modules         Time of day       3 comm. modules, 1 signal board, 8 signal modules         • Inputs       Yes         • Hardware clock (real-time clock)       Yes         • Deviation per day, max.       480 h; Typical         • Digital inputs       14; Integrated         • of which, inputs usable for technological functions       6; HSC (High Speed Counting)         integrated channels (DI)       14         m/p-reading       Yes         Number of simultaneously controllable inputs       14	flags), max.	
Process image       1 kbyte         • Inputs, adjustable       1 kbyte         • Outputs, adjustable       1 kbyte         Hardware configuration       3 comm. modules, 1 signal board, 8 signal modules         Number of modules per system, max.       3 comm. modules, 1 signal board, 8 signal modules         Clock       Ves         • Hardware clock (real-time clock)       Yes         • Deviation per day, max.       +/- 60 s/month at 25 °C         • Backup time       480 h; Typical         Digital inputs       14; Integrated         • of which, inputs usable for technological functions       6; HSC (High Speed Counting)         integrated channels (DI)       14         m/p-reading       Yes         Number of simultaneously controllable inputs       14	Flag	
• Inputs, adjustable1 kbyte• Outputs, adjustable1 kbyteHardware configurationNumber of modules per system, max.3 comm. modules, 1 signal board, 8 signal modulesTime of dayClock• Hardware clock (real-time clock)Yes• Deviation per day, max.+/- 60 s/month at 25 °C• Backup time480 h; TypicalDigital inputs14; Integrated• of which, inputs usable for technological functions6; HSC (High Speed Counting)integrated channels (DI)14m/p-readingYesNumber of simultaneously controllable inputsYes		8 kbyte; Size of bit memory address area
• Outputs, adjustable1 kbyteHardware configuration3 comm. modules, 1 signal board, 8 signal modulesNumber of modules per system, max.3 comm. modules, 1 signal board, 8 signal modulesTime of dayVesClockYes• Hardware clock (real-time clock)Yes• Deviation per day, max.+/- 60 s/month at 25 °C• Backup time480 h; TypicalDigital inputs14; Integrated• of which, inputs usable for technological functions14; Integratedintegrated channels (DI)14m/p-readingYesNumber of simultaneously controllable inputsYes		
Hardware configuration         Number of modules per system, max.       3 comm. modules, 1 signal board, 8 signal modules         Time of day         Clock       Ves         • Hardware clock (real-time clock)       Yes         • Deviation per day, max.       +/- 60 s/month at 25 °C         • Backup time       480 h; Typical         Digital inputs       14; Integrated         • of which, inputs usable for technological functions       6; HSC (High Speed Counting)         integrated channels (DI)       14         m/p-reading       Yes         Number of simultaneously controllable inputs       Yes	<ul> <li>Inputs, adjustable</li> </ul>	
Number of modules per system, max.       3 comm. modules, 1 signal board, 8 signal modules         Time of day         Clock         • Hardware clock (real-time clock)       Yes         • Deviation per day, max.       +/- 60 s/month at 25 °C         • Backup time       480 h; Typical         Digital inputs       480 h; Typical         Number of digital inputs       14; Integrated         • of which, inputs usable for technological functions       6; HSC (High Speed Counting)         integrated channels (DI)       14         m/p-reading       Yes         Number of simultaneously controllable inputs       Yes	<ul> <li>Outputs, adjustable</li> </ul>	1 kbyte
Number of modules per system, max.       3 comm. modules, 1 signal board, 8 signal modules         Time of day         Clock         • Hardware clock (real-time clock)       Yes         • Deviation per day, max.       +/- 60 s/month at 25 °C         • Backup time       480 h; Typical         Digital inputs       480 h; Typical         Number of digital inputs       14; Integrated         • of which, inputs usable for technological functions       6; HSC (High Speed Counting)         integrated channels (DI)       14         m/p-reading       Yes         Number of simultaneously controllable inputs       Yes	Hardware configuration	
Clock       Yes         • Hardware clock (real-time clock)       Yes         • Deviation per day, max.       +/- 60 s/month at 25 °C         • Backup time       480 h; Typical         Digital inputs         Number of digital inputs       14; Integrated         • of which, inputs usable for technological functions       6; HSC (High Speed Counting)         integrated channels (DI)       14         m/p-reading       Yes         Number of simultaneously controllable inputs       Yes		3 comm. modules, 1 signal board, 8 signal modules
Clock       Yes         • Hardware clock (real-time clock)       Yes         • Deviation per day, max.       +/- 60 s/month at 25 °C         • Backup time       480 h; Typical         Digital inputs         Number of digital inputs       14; Integrated         • of which, inputs usable for technological functions       6; HSC (High Speed Counting)         integrated channels (DI)       14         m/p-reading       Yes         Number of simultaneously controllable inputs       Yes	Time of day	
<ul> <li>Deviation per day, max.</li> <li>Backup time</li> <li>+/- 60 s/month at 25 °C</li> <li>480 h; Typical</li> <li>Digital inputs</li> <li>of which, inputs usable for technological functions</li> <li>integrated channels (DI)</li> <li>m/p-reading</li> <li>Number of simultaneously controllable inputs</li> </ul>		
• Deviation per day, max.+/- 60 s/month at 25 °C• Backup time480 h; TypicalDigital inputs14; Integrated• of which, inputs usable for technological functions6; HSC (High Speed Counting)• integrated channels (DI)14m/p-readingYesNumber of simultaneously controllable inputsYes	<ul> <li>Hardware clock (real-time clock)</li> </ul>	Yes
Backup time     480 h; Typical     480 h; Typical      Digital inputs     14; Integrated     6; HSC (High Speed Counting)     integrated channels (DI)     integrated channels (DI)     m/p-reading     Number of simultaneously controllable inputs		+/- 60 s/month at 25 °C
Number of digital inputs       14; Integrated         • of which, inputs usable for technological functions       6; HSC (High Speed Counting)         integrated channels (DI)       14         m/p-reading       Yes         Number of simultaneously controllable inputs		
Number of digital inputs       14; Integrated         • of which, inputs usable for technological functions       6; HSC (High Speed Counting)         integrated channels (DI)       14         m/p-reading       Yes         Number of simultaneously controllable inputs	Digital inputs	
functions     integrated channels (DI)       m/p-reading     14       Number of simultaneously controllable inputs     Yes		14; Integrated
m/p-reading     Yes       Number of simultaneously controllable inputs		6; HSC (High Speed Counting)
Number of simultaneously controllable inputs	integrated channels (DI)	14
	m/p-reading	Yes
all mounting positions	Number of simultaneously controllable inputs	
	all mounting positions	

Input voltage            • Relet value (DC)         2 V           • for signal "0"         5 V DC at 1 mA           • for signal "1", typ.         1 mA           Input current            • for signal "1", typ.         1 mA           Input dealy (for rated value of input voltage)            for standard inputs         Ves; 0.2 ms, 0.4 ms, 0.8 ms, 1.6 ms, 3.2 ms, 6.4 ms and 12.8 ms, selectable in groups of four	— up to 40 °C, max.	14
Instruction         5 V DC at 1 mA           if or signal "1"         15 VDC at 2.5 mA           Input dealy (for rated value of input voltage)         1 mA           Input dealy (for rated value of input voltage)         1 mA           Input dealy (for rated value of input voltage)         1 mA           Input dealy (for rated value of input voltage)         1 mA           Input dealy (for rated value of input voltage)         1 selectable in groups of four           - Parameterizable         selectable in groups of four           - at "0" to "1", max.         0.2 ms           - at "0" to "1", max.         12.8 ms           for interrupt inputs         2           - Parameterizable         Yes; Single phase : 3 at 100 kHz & 3 at 30 kHz, differential: 3 at 80 kHz & 3 at 30 kHz           Cable length         500 m; 50 m for technological functions           • Unshielded, max.         500 m; 50 m for technological functions           Yes         10 regrameterizable           Ves         10           shitching capacity of the outputs         10 regrameterizable           Yes         10 ms; max.           Yes         10 ms; max.           Yes         10 ms; max.           Yes         10 ms; max.           Yes         10 ms; max. <t< td=""><td>Input voltage</td><td></td></t<>	Input voltage	
ior signal "1"       15 VDC at 2.5 mA         Input current       1 mA         Input delay (for rated value of input voltage)       1 mA         for signal "1", typ.       1 mA         Input delay (for rated value of input voltage)       Yes; 0.2 ms, 0.4 ms, 0.8 ms, 1.6 ms, 3.2 ms, 6.4 ms and 12.8 ms, selectable in groups of four         - at "0" to "1", min.       - at "0" to "1", max.         - at "0" to "1", max.       12.8 ms         for counter/technological functions       -         - Parameterizable       Yes: Single phase : 3 at 100 kHz & 3 at 30 kHz, differential: 3 at 80 kHz & 3 at 30 kHz.         Cable length       -         • shielded, max.       300 m; 50 m for technological functions         • Unshielded, max.       300 m; 50 m for technological functions         Number of digital outputs       10; Relays         integrated channels (DO)       10         shielded, max.       2 A         • on lamp load, max.       2 A         • on lamp load, max.       10 ms; max.         • "1" to "0", max.       10 ms; max.         • "1" to "0", max.       10 ms; max.         • or to r1", max.       10 ms; max.         • for to "1", max.       10 ms; max.         • of the pulse outputs, integrated       10         • Number of re	Rated value (DC)	24 V
Input current         1 mA           Input delay (for rated value of input voltage)         1 mA           for standard inputs         Ves; 0.2 ms, 0.4 ms, 0.8 ms, 1.6 ms, 3.2 ms, 6.4 ms and 12.8 ms, selectable in groups of four           - at "0" to "1", min.         0.2 ms           - at "0" to "1", max.         0.2 ms           - Parameterizable         Yes           for counterrupt inputs         -           - Parameterizable         Yes           for counterritechnological functions         -           - Parameterizable         Yes: Single phase : 3 at 100 kHz & 3 at 30 kHz, differential: 3 at 80 kHz & 3 at 30 kHz           Cable length         500 m; 50 m for technological functions           • shielded, max.         500 m; 50 m for technological functions           • Unshielded, max.         300 with Z & 3 at 30 kHz           Object outputs         -           Number of digital outputs         10; Relays           integrated channels (DO)         10           shirt-circuit protection         No; to be provided externally           Switching capacity of the outputs         -           • on lamp load, max.         2 A           • on lamp load, max.         10 ms; max.           • "0" to "n", max.         10 ms; max.           Switching frequency	● for signal "0"	5 V DC at 1 mA
• for signal "1", typ.         1 mA           Input delay (for rated value of input voltage)         for standard inputs           • Parameterizable         Yes; 0.2 ms, 0.4 ms, 0.8 ms, 1.6 ms, 3.2 ms, 6.4 ms and 12.8 ms, selectable in groups of four           • - at "0" to "1", min.         0.2 ms           • - at "0" to "1", max.         12.8 ms           for interrupt inputs         -           Parameterizable         Yes           for counter/lechnological functions         -           - Parameterizable         Yes; Single phase : 3 at 100 kHz & 3 at 30 kHz, differential: 3 at 80 kHz & 3 at 30 kHz.           Cable length         -           • shielded, max.         500 m; 50 m for technological functions           • Unshielded, max.         300 m; For technological functions           • Unshielded, max.         300 m; For technological functions           for idigital outputs         10; Relays           Number of digital outputs         10 No; to be provided externally           Switching capacity of the outputs         2 A           • on lamp load, max.         2 A           • on lamp load, max.         10 ms; max.           • "0" to "1", max.         10 ms; max.           • "1" to "0", max.         1 Hz           Felay outputs         10 ms; max.           •	● for signal "1"	15 VDC at 2.5 mA
Input delay (for rated value of input voltage)         for standard inputs         - Parameterizable         - at "0" to "1", min.         - at "0" to "1", max.         - at "0" to "1", max.         - Parameterizable         Yes: 0.2 ms, 0.4 ms, 0.8 ms, 1.6 ms, 3.2 ms, 6.4 ms and 12.8 ms, selectable in groups of four         - at "0" to "1", max.         - at "0" to "1", max.         - Parameterizable       Yes         for counter/technological functions         - Parameterizable       Yes         for counter/technological functions         - Parameterizable       Yes: Single phase : 3 at 100 kHz & 3 at 30 kHz, differential: 3 at 80 kHz & 3 at 30 kHz.         Cable length       -         • shielded, max.       500 m; 50 m for technological functions         • Unshielded, max.       500 m; 50 m for technological functions         • Unshielded, max.       500 m; 50 m for technological functions         Number of digital outputs       10; Relays         integrated channels (DO)       10         shirt-dircuit protection       No; to be provided externally         Switching capacity of the outputs       2 A         • on lamp load, max.       2 A         • on lamp load, max.       30 W with DC, 200 W with AC         Output delay with	Input current	
for standard inputs	● for signal "1", typ.	1 mA
Parameterizable       Yes; 0.2 ms, 0.4 ms, 0.8 ms, 1.6 ms, 3.2 ms, 6.4 ms and 12.8 ms, selectable in groups of four         at "0" to "1", min.       0.2 ms         at "0" to "1", max.       12.8 ms         for interrupt inputs       -         Parameterizable       Yes         for counter/technological functions       -         Parameterizable       Yes; Single phase : 3 at 100 kHz & 3 at 30 kHz, differential: 3 at 80 kHz & 3 at 30 kHz.         Cable length       -         • shielded, max.       500 m; 50 m for technological functions         • Unshielded, max.       300 m; For technological functions: No         Digital outputs       10; Relays         integrated channels (DO)       10         short-circuit protection       No; to be provided externally         Switching capacity of the outputs       2 A         • with resistive load, max.       30 W with DC, 200 W with AC         Output delay with resistive load       -         • "i" to "0", max.       10 ms; max.         • of the pulse outputs, integrated       10         • Number of relay outputs       10         • of the pulse outputs, integrated       10         • Number of relay outputs       10         • or "to "t" to "0", max.       500 m         • or	Input delay (for rated value of input voltage)	
selectable in groups of four           at "0" to "1", max.           at "0" to "1", max.           12.8 ms           for interrupt inputs           Parameterizable         Yes           for counter/technological functions           Parameterizable         Yes: Single phase : 3 at 100 kHz & 3 at 30 kHz, differential: 3 at 80 kHz & 3 at 30 kHz           Cable length         Yes: Single phase : 3 at 100 kHz & 3 at 30 kHz, differential: 3 at 80 kHz & 3 at 30 kHz           Cable length         500 m; 50 m for technological functions           · Unshielded, max.         500 m; 50 m for technological functions           · Unshielded, max.         500 m; 50 m for technological functions           reference         10; Relays           integrated channels (DO)         10           short-circuit protection         No; to be provided externally           Switching capacity of the outputs         2 A           • with resistive load, max.         2 A           • on tamp load, max.         10 ms; max.           • "o" to ",", max.         10 ms; max.           • "o" to ",", max.         10 ms; max.           • "o" to ",", max.         10           • on tamp load, max.         10           • on tamp load, max.         10           • on the pulse outputs, i	for standard inputs	
	— Parameterizable	
for interrupt inputs         Parameterizable       Yes         for counter/technological functions          Parameterizable       Yes; Single phase : 3 at 100 kHz & 3 at 30 kHz, differential: 3 at 80 kHz & 3 at 30 kHz & 3 at 30 kHz & 3 at 30 kHz         Cable length          • shielded, max.       500 m; 50 m for technological functions         • Unshielded, max.       300 m; For technological functions: No         Digital outputs       10, Relays         Number of digital outputs       10         integrated channels (DO)       10         shot-circuit protection       No; to be provided externally         Switching capacity of the outputs          • with resistive load, max.       2 A         • on lamp load, max.       30 W with DC, 200 W with AC         Output delay with resistive load          • "0" to "t", max.       10 ms; max.         • "0" to "t", max.       10 ms; max.         • of the pulse outputs, with resistive load, max.       1 Hz         Relay outputs          • Number of relay outputs, integrated       10         • Number of relay outputs, integrated       10         • Number of relay outputs, max.       mechanically 10 million, at rated load voltage 100,000         Cable le	— at "0" to "1", min.	0.2 ms
	— at "0" to "1", max.	12.8 ms
for counter/technological functions         — Parameterizable       Yes; Single phase : 3 at 100 kHz & 3 at 30 kHz, differential: 3 at 80 kHz & 3 at 30 kHz         Cable length       500 m; 50 m for technological functions         • shielded, max.       500 m; 50 m for technological functions         • Unshielded, max.       300 m; For technological functions         • Unshielded, max.       300 m; For technological functions         • Unshielded, max.       10; Relays         integrated channels (DO)       10         short-circuit protection       No; to be provided externally         Switching capacity of the outputs       2 A         • on lamp load, max.       2 A         • on lamp load, max.       10 ms; max.         • "0" to "1", max.       10 ms; max.         • "0" to "1", max.       10 ms; max.         • "0" to "1", max.       10 ms; max.         • of the pulse outputs, with resistive load, max.       1 Hz         Relay outputs       10         • Number of relay outputs, integrated       10         • Number of operating cycles, max.       mechanically 10 million, at rated load voltage 100,000         Cable length       500 m         • Number of operating cycles, max.       500 m         • Unshielded, max.       500 m         •	for interrupt inputs	
— ParameterizableYes; Single phase : 3 at 100 kHz & 3 at 30 kHz, differential: 3 at 80 kHz & 3 at 30 kHzCable length• shielded, max.500 m; 50 m for technological functions• Unshielded, max.300 m; For technological functions: NoDigital outputs10; RelaysNumber of digital outputs10integrated channels (DO)10short-circuit protectionNo; to be provided externallySwitching capacity of the outputs2 A• with resistive load, max.2 A• on lamp load, max.10 ms; max.• "0" to "1", max.10 ms; max.• "0" to "1", max.10 ms; max.• "0" to "1", max.10 ms; max.• of the pulse outputs, with resistive load, max.1 HzRelay outputs10• Number of relay outputs, integrated10• Number of operating cycles, max.10• Number of operating cycles, max.10• Unshielded, max.500 m• Unshielded, max.500 m• Unshielded, max.150 m	— Parameterizable	Yes
80 kHz & 3 at 30 kHz       Cable length       • shielded, max.     500 m; 50 m for technological functions       • Unshielded, max.     300 m; For technological functions: No       Digital outputs     10; Relays       Number of digital outputs     10; Relays       integrated channels (DO)     10       short-circuit protection     No; to be provided externally       Switching capacity of the outputs     2 A       • with resistive load, max.     2 A       • on lamp load, max.     30 W with DC, 200 W with AC       Output delay with resistive load	for counter/technological functions	
• shielded, max.       500 m; 50 m for technological functions         • Unshielded, max.       300 m; For technological functions: No         Digital outputs       10; Relays         Integrated channels (DO)       10         short-circuit protection       No; to be provided externally         Switching capacity of the outputs       2 A         • with resistive load, max.       2 A         • on lamp load, max.       30 W with DC, 200 W with AC         Output delay with resistive load       0 ms; max.         • "0" to "1", max.       10 ms; max.         • "0" to "1", max.       10 ms; max.         • "0" to "1", max.       10 ms; max.         • of the pulse outputs, with resistive load, max.       1 Hz         Relay outputs       10         • Number of relay outputs, integrated       10         • Number of relay outputs       10         • Number of orelay outputs       10         • Number of operating cycles, max.       500 m         • shielded, max.       500 m         • Unshielded, max.       500 m         • Unshielded, max.       500 m	— Parameterizable	
• Unshielded, max.     300 m; For technological functions: No       Digital outputs     10; Relays       Number of digital outputs     10; Relays       integrated channels (DO)     10       short-circuit protection     No; to be provided externally       Switching capacity of the outputs     2 A       • with resistive load, max.     2 A       • on lamp load, max.     300 W with DC, 200 W with AC       Output delay with resistive load     10 ms; max.       • "0" to "1", max.     10 ms; max.       • "0" to "1", max.     10 ms; max.       • "0" to "1", max.     10 ms; max.       • of the pulse outputs, with resistive load, max.     1 Hz       Relay outputs     10       • Number of relay outputs, integrated     10       • Number of relay outputs     10       • Number of nelay outputs     500 m       • shielded, max.     500 m       • Unshielded, max.     500 m	Cable length	
Digital outputs       10; Relays         Number of digital outputs       10         integrated channels (DO)       10         short-circuit protection       No; to be provided externally         Switching capacity of the outputs       •         • with resistive load, max.       2 A         • on lamp load, max.       30 W with DC, 200 W with AC         Output delay with resistive load       •         • "0" to "1", max.       10 ms; max.         • "1" to "0", max.       10 ms; max.         • of the pulse outputs, with resistive load, max.       1 Hz         Relay outputs       •         • Number of relay outputs, integrated       10         • Number of relay outputs       10         • Number of poperating cycles, max.       mechanically 10 million, at rated load voltage 100,000         Cable length       • shielded, max.       500 m         • Unshielded, max.       150 m	• shielded, max.	500 m; 50 m for technological functions
Number of digital outputs       10; Relays         integrated channels (DO)       10         short-circuit protection       No; to be provided externally         Switching capacity of the outputs       •         • with resistive load, max.       2 A         • on lamp load, max.       30 W with DC, 200 W with AC         Output delay with resistive load       •         • "0" to "1", max.       10 ms; max.         • "0" to "1", max.       10 ms; max.         • "1" to "0", max.       10 ms; max.         Switching frequency       •         • of the pulse outputs, with resistive load, max.       1 Hz         Relay outputs       10         • Number of relay outputs, integrated       10         • Number of prelay outputs, integrated       10         • Number of operating cycles, max.       mechanically 10 million, at rated load voltage 100,000         Cable length       \$500 m         • shielded, max.       500 m         • Unshielded, max.       150 m	<ul> <li>Unshielded, max.</li> </ul>	300 m; For technological functions: No
Number of digital outputs       10; Relays         integrated channels (DO)       10         short-circuit protection       No; to be provided externally         Switching capacity of the outputs       •         • with resistive load, max.       2 A         • on lamp load, max.       30 W with DC, 200 W with AC         Output delay with resistive load       •         • "0" to "1", max.       10 ms; max.         • "0" to "1", max.       10 ms; max.         • "1" to "0", max.       10 ms; max.         Switching frequency       •         • of the pulse outputs, with resistive load, max.       1 Hz         Relay outputs       10         • Number of relay outputs, integrated       10         • Number of prelay outputs, integrated       10         • Number of operating cycles, max.       mechanically 10 million, at rated load voltage 100,000         Cable length       \$500 m         • shielded, max.       500 m         • Unshielded, max.       150 m	Digital outputs	
short-circuit protection       No; to be provided externally         Switching capacity of the outputs       2 A         • with resistive load, max.       2 A         • on lamp load, max.       30 W with DC, 200 W with AC         Output delay with resistive load		10; Relays
Switching capacity of the outputs         • with resistive load, max.       2 A         • on lamp load, max.       30 W with DC, 200 W with AC         Output delay with resistive load	integrated channels (DO)	10
• with resistive load, max.2 A• on lamp load, max.30 W with DC, 200 W with ACOutput delay with resistive load• "0" to "1", max.10 ms; max.• "0" to "0", max.10 ms; max.• "1" to "0", max.10 ms; max.Switching frequency• of the pulse outputs, with resistive load, max.1 HzRelay outputs10• Number of relay outputs, integrated10• Number of relay outputs10• Number of operating cycles, max.mechanically 10 million, at rated load voltage 100,000Cable length500 m• shielded, max.150 m	short-circuit protection	No; to be provided externally
• on lamp load, max.       30 W with DC, 200 W with AC         Output delay with resistive load       10 ms; max.         • "0" to "1", max.       10 ms; max.         • "1" to "0", max.       10 ms; max.         Switching frequency       10 ms; max.         • of the pulse outputs, with resistive load, max.       1 Hz         Relay outputs       10         • Number of relay outputs, integrated       10         • Number of relay outputs       10         • Number of operating cycles, max.       mechanically 10 million, at rated load voltage 100,000         Cable length       500 m         • Shielded, max.       500 m         • Unshielded, max.       150 m	Switching capacity of the outputs	
Output delay with resistive load         • "0" to "1", max.         • "0" to "1", max.         • "1" to "0", max.         Switching frequency         • of the pulse outputs, with resistive load, max.         1 Hz         Relay outputs         • Number of relay outputs, integrated         • Number of relay outputs         • Number of operating cycles, max.         • Mumber of operating cycles, max.         • Shielded, max.         • Shielded, max.         • Unshielded, max.         • Unshielded, max.	<ul> <li>with resistive load, max.</li> </ul>	2 A
• "0" to "1", max.10 ms; max.• "1" to "0", max.10 ms; max.Switching frequency10 ms; max.• of the pulse outputs, with resistive load, max.1 HzRelay outputs10• Number of relay outputs, integrated10• Number of relay outputs10• Number of operating cycles, max.mechanically 10 million, at rated load voltage 100,000Cable length500 m• shielded, max.500 m• Unshielded, max.150 m	<ul> <li>on lamp load, max.</li> </ul>	30 W with DC, 200 W with AC
• "1" to "0", max.10 ms; max.Switching frequency1 Hz• of the pulse outputs, with resistive load, max.1 HzRelay outputs1 0• Number of relay outputs, integrated10• Number of relay outputs10• Number of operating cycles, max.mechanically 10 million, at rated load voltage 100,000Cable length500 m• Shielded, max.500 m• Unshielded, max.500 m	Output delay with resistive load	
Switching frequency <ul> <li>of the pulse outputs, with resistive load, max.</li> <li>Hz</li> </ul> Relay outputs              10 <ul> <li>Number of relay outputs</li> <li>Number of relay outputs</li> <li>Number of operating cycles, max.</li> <li>mechanically 10 million, at rated load voltage 100,000</li> </ul> Cable length              500 m <ul> <li>Unshielded, max.</li> <li>150 m</li> </ul> Analog inputs <ul> <li>Analog inputs</li> </ul>	● "0" to "1", max.	10 ms; max.
<ul> <li>of the pulse outputs, with resistive load, max.</li> <li>Relay outputs</li> <li>Number of relay outputs, integrated</li> <li>Number of relay outputs</li> <li>Number of operating cycles, max.</li> <li>Cable length</li> <li>Shielded, max.</li> <li>Unshielded, max.</li> <li>S00 m</li> <li>150 m</li> </ul>	• "1" to "0", max.	10 ms; max.
Relay outputs         • Number of relay outputs, integrated       10         • Number of relay outputs       10         • Number of operating cycles, max.       mechanically 10 million, at rated load voltage 100,000         Cable length       500 m         • Shielded, max.       500 m         • Unshielded, max.       150 m	Switching frequency	
<ul> <li>Number of relay outputs, integrated</li> <li>Number of relay outputs</li> <li>Number of operating cycles, max.</li> <li>Number of operating cycles, max.</li> <li>Shielded, max.</li> <li>Unshielded, max.</li> <li>To m</li> </ul>	<ul> <li>of the pulse outputs, with resistive load, max.</li> </ul>	1 Hz
<ul> <li>Number of relay outputs</li> <li>Number of operating cycles, max.</li> <li>Cable length</li> <li>Shielded, max.</li> <li>Unshielded, max.</li> <li>500 m</li> <li>150 m</li> </ul>	Relay outputs	
<ul> <li>Number of operating cycles, max. mechanically 10 million, at rated load voltage 100,000</li> <li>Cable length         <ul> <li>shielded, max.</li> <li>Unshielded, max.</li> </ul> </li> <li>Analog inputs</li> </ul>	<ul> <li>Number of relay outputs, integrated</li> </ul>	10
Cable length       • shielded, max.       • Unshielded, max.       150 m	<ul> <li>Number of relay outputs</li> </ul>	10
shielded, max. 500 m     Unshielded, max. 150 m Analog inputs	<ul> <li>Number of operating cycles, max.</li> </ul>	mechanically 10 million, at rated load voltage 100,000
Unshielded, max.      Analog inputs	Cable length	
Analog inputs	• shielded, max.	500 m
	• Unshielded, max.	150 m
Number of analog inputs 2		
	Analog inputs	

Integrated channels (AI)	2; 0 to 10 V
Input ranges	
Voltage	Yes
Input ranges (rated values), voltages	
• 0 to +10 V	Yes
Input resistance (0 to 10 V)	≥100k ohms
Cable length	
• shielded, max.	100 m; twisted and shielded
• Shieldeu, max.	
Analog outputs	
Number of analog outputs	2
Integrated channels (AO)	2; 0 to 20 mA
Output ranges, current	
• 0 to 20 mA	Yes
Cable length	
• shielded, max.	100 m; shielded, twisted pair
Analog value creation	
Integration and conversion time/resolution per channel	
<ul> <li>Resolution with overrange (bit including sign),</li> </ul>	10 bit
max.	
<ul> <li>Integration time, parameterizable</li> </ul>	Yes
Conversion time (per channel)	625 μs
Encoder Connectable encoders	
	Yes
• 2-wire sensor	
1st interface	
Interface type	PROFINET
Physics	Ethernet
Isolated	Yes
Automatic detection of transmission speed	Yes
Autonegotiation	Yes
Autocrossing	Yes
Functionality	
PROFINET IO Device	Yes
PROFINET IO Controller	Yes
PROFINET IO Controller	
<ul> <li>Transmission rate, max.</li> </ul>	100 Mbit/s
<ul> <li>Number of connectable IO devices, max.</li> </ul>	16
Prioritized startup	
— Number of IO Devices, max.	16
PROFINET IO Device	
Services	
00110003	

— Shared device	Yes
— Number of IO controllers with shared	2
device, max.	-
Communication functions	
S7 communication	
<ul> <li>supported</li> </ul>	Yes
• as server	Yes
• As client	Yes
Open IE communication	
• TCP/IP	Yes
• ISO-on-TCP (RFC1006)	Yes
• UDP	Yes
Web server	
supported	Yes
<ul> <li>User-defined websites</li> </ul>	Yes
Number of connections	
• overall	16; dynamically
Test commissioning functions	
Status/control	
<ul> <li>Status/control variable</li> </ul>	Yes
Variables	Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters
Forcing	
Forcing	Yes
Diagnostic buffer	
• present	Yes
Traces	
<ul> <li>Number of configurable Traces</li> </ul>	2; Up to 512 KB of data per trace are possible
Integrated Functions	
Number of counters	6
Counter frequency (counter) max.	100 kHz
Frequency meter	Yes
controlled positioning	Yes
PID controller	Yes
Number of alarm inputs	4
Galvanic isolation	
Galvanic isolation digital inputs	
<ul> <li>Galvanic isolation digital inputs</li> </ul>	500V AC for 1 minute
<ul> <li>between the channels, in groups of</li> </ul>	1
Galvanic isolation digital outputs	
<ul> <li>Galvanic isolation digital outputs</li> </ul>	Relays

<ul> <li>between the channels</li> </ul>
--

• between the channels, in groups of

No 2

### Permissible potential difference

between different circuits

500 V DC between 24 V DC and 5 V DC

EMC	
Interference immunity against discharge of static electri	city
<ul> <li>Interference immunity against discharge of static electricity acc. to IEC 61000-4-2</li> </ul>	Yes
— Test voltage at air discharge	8 kV
<ul> <li>— Test voltage at contact discharge</li> </ul>	6 kV
Interference immunity to cable-borne interference	
<ul> <li>Interference immunity on supply lines acc. to IEC 61000-4-4</li> </ul>	Yes
<ul> <li>Interference immunity on signal lines acc. to IEC 61000-4-4</li> </ul>	Yes
Surge immunity	
<ul> <li>on the supply lines acc. to IEC 61000-4-5</li> </ul>	Yes
Immunity against conducted interference induced by high	gh-frequency fields
<ul> <li>Interference immunity against high-frequency radiation acc. to IEC 61000-4-6</li> </ul>	Yes
Emission of radio interference acc. to EN 55 011	
<ul> <li>Limit class A, for use in industrial areas</li> </ul>	Yes; Group 1
<ul> <li>Limit class B, for use in residential areas</li> </ul>	Yes; When appropriate measures are used to ensure compliance with the limits for Class B according to EN 55011
Degree and class of protection	
Degree of protection to EN 60529	
• IP20	Yes
Standards, approvals, certificates	
CE mark	Yes
UL approval	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
FM approval	Yes
Marine approval	
Marine approval	Yes
Ambient conditions	
Free fall	
<ul> <li>Drop height, max. (in packaging)</li> </ul>	0.3 m; five times, in dispatch package
Ambient temperature in operation	
• Min.	-20 °C

last modified:	12.03.2015
Weight, approx.	550 g
Weights	
-	
Depth	75 mm
Height	100 mm
Dimensions Width	130 mm
• can be set	Yes
Cycle time monitoring	
— FBD — SCL	Yes
— FBD	Yes
	Yes
programming Programming language	
Pollutant concentrations — SO2 at RH < 60% without condensation	S02: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-free
	value), duration 11 ms
<ul> <li>checked according to IEC 60068-2-27</li> </ul>	Yes; IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak
Shock test	
<ul> <li>Operation, checked according to IEC 60068-2-</li> <li>6</li> </ul>	Yes
Vibrations	2G wall mounting, 1G DIN rail
Vibrations	
°C	
<ul> <li>Permissible range (without condensation) at 25</li> </ul>	95 %
• Operation, max.	95 %; no condensation
Relative humidity	
Permissible operating height	-1000 to 2000 m
Storage/transport, max.	1 080 hPa
<ul> <li>Storage/transport, min.</li> </ul>	660 hPa
Air pressure acc. to IEC 60068-2-13	
• max.	70 °C
• Min.	-40 °C
Storage/transport temperature	
<ul> <li>vertical installation, max.</li> </ul>	50 °C
<ul> <li>vertical installation, min.</li> </ul>	-20 °C
<ul> <li>horizontal installation, max.</li> </ul>	60 °C
<ul> <li>horizontal installation, min.</li> </ul>	10 at 55 °C horizontal or 45 °C vertical -20 °C
	5 (no adjacent points) at 60 °C horizontal or 50 °C vertical, 14 or
● max.	60 °C; Number of simultaneously activated inputs or outputs 7 or

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